DESIGN.

To quote the opening words of Walter Crane's "Books of Design:" "When we approach the study of design from whatever point of view, and whatever our ultimate aim, we can hardly fail to be impressed with the vast variety and endless complexity of forms which the term 'design' covers; in fact, it involves the history of mankind.

"From the simplest linear patterns or bone scratchings of primitive man to the most splendid achievement in mural decoration of Ancient Greece; from the grass mat of the first plaiter to the finest Persian carpet; or from Stonehenge to Cologne Cathedral the range is enormous."

We must ask ourselves what has led to this decorative instinct in man. I think we may call it the instinctive craving of a human being to express his love of the beautiful by decorating most things which he uses, and especially what he particularly loves and reveres.

Ornament should be rightly an essential expression and organic part of an object, and it should be beautiful and satisfactory in line, form, and proportion.

Pattern design, with which we are chiefly concerned, is one form of ornament. Broadly speaking, its function is to enliven with beauty and incident what would otherwise be a blank space. Wheresoever and whatsoever it may be, the absolute necessities of the art are:

1. Restfulness of Form.
2. Beauty of Colour.

The form may be merely that of abstract lines and spaces, and the colour brought about by the simplest combinations.

There are certain systems and units of patterns which have held their own in the world of design from earliest times and are still used at the present day. There is something so fixed and fundamental about them that they may be said to answer the requirements of decorative logic, that is, they lend themselves to fulfilment of certain principles, without adhering

to some of which, at least, it is impossible to have a good design. These are—order, rhythm, symmetry, balance, contrast, variety (continuity), radiation, proportion, repetition, and re-echo.

In the primitive ornament of all peoples we find these typical forms, both abstract and symbolical, constantly recurring; they are the germs of pattern designs afterwards developed, complicated and refined upon, *e.g.*, square, circle, chequer, zig-zag, fret, gulloche, meander, spiral, volute, twisting, scroll, diaper, ogee, dog-tooth. A good form once found in ornament is repeated, and long after the forms themselves had ceased to be the chief part of the ornament, their controlling influence is asserted over the boundaries of more complicated masses.

Here show early systems and units of design. Let children learn some of them and re-combine them.

If we desire to have a key to the growth and relations of these manifold forms, we must ask ourselves the following questions:—

I. What are the causes of their general form and character?

II. From what sources they are derived?

III. What have been the chief influences that have determined and still determine their variety?

I think we shall find the answer to our first question in the general form and character of the dwellings of man. As we have already observed, man's innate love of ornament led him to decorate whatever he used, and more especially what he revered, and hence his home, whether tent or palace, and his temples afforded him the earliest field for his ingenuity. Even the Red Indian of to-day paints on his wigwam a rough design, and here we find an ubiquitous zig-zag once more.

Now the different kinds of architecture led to various methods of design, and chiefly by means of the different kinds of spaces which they afforded for decoration. For instance, from Greek Architecture we get the frieze, a running repeating design, enclosed between parallel lines; from Byzantine Architecture we get the dome, entailing a complete and finished design bounded by a circle; in Gothic Architecture we get the arch, entailing a narrow repeating border.

So that controlling boundary lines seem to be one of the

most important, if not the most important question in pattern design, for the lines of the design itself must echo and re-echo those of the boundary to be pleasant to the eye, and the boundary lines themselves, when not some simple geometrical pattern, must have pleasant and agreeable curves.

With regard to recurring lines, we seem to feel the need of some answering line or re-echo in the character of the composition to the shape of its boundary.

To give a distinctive reason for its existence in that particular form (*e.g.*, shellfish). By this means certain primitive types of ornament are evolved; such as the Greek volute and fret, the logical ornament of a logical people.

The character of your mass should be reflected in the form of your detail.

Series of lessons in filling in spaces. Let the same spaces be filled in by different fillings; the same spaces can be taken later for flowers. Shapes, vases, barge boards, &c., might be taken to give variety.

We now come to enquire into the answer to our second question. From what sources are some of these typical forms in design derived, for we know that the imagination must primarily have something to feed on, although it can recombine its pabulum into an infinite variety of forms. On consideration we should imagine that primitive man would get his first ideas of decoration from what he daily used and saw; and on observation we find this to be the case. It is obvious that the ideas of such units as the meander and gulloche are taken from a wattle fence; while the chequer, most universal and imperishable of all patterns, is as obviously taken from a plaited mat, the fringe of the mat suggesting a border. The primitive method, too, of fastening things together by means of binding with strips of leather or withys suggested such an ornament as the zig-zag. The columns of the temple of Luxor imitate the reed binding by means of which the early Egyptians built their houses. This teaches, I think, that it is a good thing to take simple forms well known to children, such as tops and shuttlecocks, and let them make them into simple designs. Children should be taught these typical units of ornament legends well where possible.

A very fruitful source of typical forms is symbolism.

We find certain forms, such as the round disc sometimes standing for the universe, sometimes the sun, and the "fylfot" originally symbolising the supreme God of the Aryans, and then standing as an emblem of divinity common to several nations. The zig-zag represented water to several primitive peoples. To the Persians and Assyrians we owe the palm as a decorative unit. It stood for the tree of life to them, and denoted benison and a message of good will. Other forms of the palm are the Indian and Persian palmette. Then there is the Danish fire-symbol and an Indian sacred flame and the Egyptian lotus; the Persian pink and pomegranate, and star of Bethlehem, and the Japanese chrysanthemums. These are all common units of ornament. Nor are they by any means all.

Of course race and climate too are fertile sources of design. We have already seen some of the units derived from race under symbolism; and racial characteristic being largely the outcome of climate, we find we get from Eastern and Southern races emphatic contrasting colours and patterns, such as tiles and mosaics. Bright sunlight seems to have a flattening effect upon colour, so that what would look garish under our grey skies, looks quite appropriate under the bright skies of Italy and the East.

In this sense race and climate come more under the heading of influence on design than sources; and in answering our third question, "What have been the chief influences that have determined and still determine their varieties?" we should call the influence of race as affected by climate a very strong one.

We might make use of this fact by letting the children colour their designs according to the weather in which they were working—vivid colours on a bright day, and more sober colours on a dull day.

A very important influence is that of conditions in design, that is, the general laws governing the place and purpose of design, and their position in relation to the eye. Designs for different planes and extensions and for different positions and uses must be accordingly planned and constructed. For instance, the ornamental conditions governing designs for wall papers or hangings demand patterns which climb up and spread latterally without any apparent effort.

Frieze designs demand horizontal extension and definite rhythm; this is most important in border designs. Designs for extension upon floors, pavements, and ceilings, where the effect of perspective distorts forms as they recede, are best treated with a square, circular, diamond or fish-scale bases, since these preserve their forms in perspective best.

Several lessons could be given for these principles, the children making designs for borders, wall papers, floor, &c., out of the materials they have already had.

Another important influence is that of material and method in the treatment of design; *e.g.*, compare such different materials as clay and ironwork materials, which differ so essentially that the method of treating them must be totally different. Clay is a most plastic material; can be moulded to any shape, and built up or depressed, while iron is exactly the reverse, and indeed, owes its character to its limitations. A flowing floral design would be quite appropriate to a plaster frieze, but quite out of place in an ironwork paling.

Ironwork shows what ornamental effect can be gained by an economy of means, the effectiveness of simply repeating well-chosen curves, spirals and lines. Its units are few: the bar, the spiral curve and flat leaf, but these, harmoniously arranged, show how perfectly serviceableness and beauty may be united, and illustrate the essential unity of material and method.

Indeed, in every kind of design, it is best to stick to simple forms until they are thoroughly mastered; but it seems to me that a lesson in design needs an object for which the design is suited, and ironwork would lend itself particularly well to some simple designs in ornate work.

Design for iron palings; design for iron fire screens; design for iron gate, &c.

The designer should always know what material the design is to be carried out in, and, if possible, have some acquaintance with that material. In such materials as clay and iron this is often possible.

We now come to perhaps the most important factor in design, both as a source and influence, that of nature. A great number, if not most, of the conventional units of design were originally derived from nature, such as the acanthus and palm. Although earlier art seeks rather to perpetuate

types, symbols, and emblems of the wonder of life, and mystery of the universe; while later art strives more to follow nature through her manifold forms and glorious colour. But we must keep well before us that pattern design should be ornamental, not graphic. We want in design to suggest the facts of nature, not to describe them. The main difference between purely graphic or naturalistic, and ornamental or decorative drawings, is that in the former individual characteristics or differences are sought for (what we in our nature work term the gesture of a plant); while in the latter typical forms or correspondences are sought for. For instance, if the principal forms in our pattern are, say, apples, we must re-echo or carry out the typical curves in a lesser degree in connecting stems to leaves; change the form of the fruit to, say, lemons, and a different variation of connecting or subsidiary curve will suggest itself. For in good design nature must be formalised.

I have taken nature last because it seems to me that the children should have a number of conventional units and systems of design by heart before they attempt to use nature in design, and before using a natural form in design, they should know it by heart.

Lessons may be given on the evolution of the rosette, and the gradations of leaf form, showing how various leaves fit into one shape.

The forms of flowers should be learnt by heart, then formalised and different flowers fitted into the same boundary lines, while the same plant-forms may be arranged to suit different shaped designs, *e.g.*, square and circle.